

Remarks

Claims 1 and 11, the only independent claims of this application, are amended. Claims 1 to 11 are pending in this application.

In paragraphs 2 and 3, the Office rejected claims 1 to 11 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In particular, the Office rejected the term "the output quantity" in line 1 of claims 1 and 11 for lack of antecedent basis.

In response, applicants have appropriately amended claims 1 and 11 so that they should now be definite as required by the statute.

In paragraphs 4 and 5, the Office rejected claims 1 to 11 under 35 U.S.C. §102(e) as being anticipated by United States Patent 6,487,489 to Schmitt et al (hereinafter "Schmitt").

Schmitt discloses a method and an arrangement for controlling the speed of a vehicle. The actual speed of the vehicle is determined and a desired speed and/or limit speed is pre-given. Furthermore, an engine drag torque controller and/or a drive slip controller are provided. At least one of these controllers is supplied with the deviation between the desired and/or limit speed on the one hand and actual speed on the other hand. During the active speed control operation, at least one of these controllers influences an output quantity of the drive unit in dependence upon this speed deviation. In the active road speed operation, the drive slip controller influences an output

quantity of the drive unit in dependence upon the speed deviation. If the actual speed exceeds the desired speed by a certain value, the drive slip controller is activated and determines a desired torque MDESASR based on the difference between actual speed and the desired speed. This desired torque value is successively reduced as long as a positive slip is present, that is, as long as the actual speed exceeds the desired speed. If the positive slip has vanished or is negative, the desired torque value MDESASR is successively increased until it reaches the maximum value. Thereafter, in a torque coordination step, the desired torque MCOMMAND is determined from (a) the accelerator command torque MFA, (b) the desired torque of the engine drag torque control MDESMSR and (c) the desired torque of the drive slip controller MDESASR. The desired torque MCOMMAND is then implemented by at least one control variable of the drive unit, such as by the position of the throttle flap, fuel mass or ignition angle etc.

Accordingly, when a positive slip exists, that is, the actual speed is larger than the desired speed, the drive slip controller reduces the drive torque until the slip is eliminated. Thus, Schmitt is concerned with the balance between the drive torque and drive resistance. If the actual speed is less than the desired speed, the drive slip controller increases the drive torque again, so that the vehicle accelerates. In this manner, the speed can be adjusted to the desired value.

Claim 1 requires:

"adjusting said output  
quantity (NMOTACT) utilizing a controller  
output (MDES) and causing said output

quantity (NMOTACT) to track an input value (NMOTDES); and,

bringing said controller output (MDES) to a pregiven limit value (MO, MU) in at least one pregiven operating state of said vehicle when a pregiven control deviation (dny) of said output quantity (NMOTACT) is exceeded" (emphasis added)

Claim 11 contain corresponding language.

In Schmitt, the speed is apparently provided as the output quantity of a drive unit and the actual speed of the vehicle is adapted to a desired speed. To this end, a controller output is utilized, which is, for example, the desired torque value MDESASR of the drive slip controller. Schmitt also mentions the possibility that a pregiven control deviation of the actual and the desired speeds of the vehicle is exceeded. If this is the case, Schmitt activates the drive slip controller which reduces the desired torque MDESASR successively as long as a positive slip is present, that is, as long as the actual speed exceeds the desired speed. In contrast, if in the present invention a pregiven control deviation of the output quantity is exceeded, the controller output (MDES) is brought to a pregiven limit value. Schmitt does not disclose this limitation of the presently claimed invention. In particular, Schmitt does not disclose that the desired torque MDESASR is brought to a pregiven limit value, that is, a maximum or minimum value. Rather Schmitt discloses that the desired torque MDESASR is reduced as long as a positive slip is present, that is, as long as the actual speed exceeds the desired speed. Applicants submit that the process described by Schmitt constitutes a control process well known in the art.

The output quantity control of the present invention allows, by bringing the controller output to a pregiven limit value when a pregiven control deviation (dnv) of the output quantity (NMOTACT) is exceeded, to minimize the control deviation rapidly by using the range of the controller output, which is confined by limit values, to its fullest extent. If Schmitt would, instead of successively reducing the desired torque MDESASR of the drive slip controller, immediately use the lower limit value of the desired torque MDESASR as suggested by the inventors of the present invention, Schmitt could reduce the actual speed to the desired speed considerably faster than using the procedure he discloses.

Applicants have shown that Schmitt does not disclose all the elements of claims 1 and 11 as required for an anticipation rejection under 35 U.S.C. §102(e). Accordingly, claims 1 and 11 should now be in condition for allowance. Claims 2 to 10 which are dependent on claim 1 should also be allowable.

Reconsideration of the application is respectfully requested.

Respectfully submitted,



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